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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**MAILED**

Application Number: 09/486,723  
Filing Date: May 18, 2000  
Appellant(s): LAMLA ET AL.

**AUG 07 2007**

**Technology Center 2100**

John R. Schaefer (Reg. No. 47,921)  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 4/17/07 appealing from the Office action  
mailed 11/17/06.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,894,425	Saliba	4-1999
3,806,874	Ehrat	4-1974

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claim 1, 8-10, 12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Saliba (US 5,894,425).

**Claim 1:**

Saliba discloses:

1. Providing a first bidirectional channel for transmitting signals having signal patterns between the data carrier and the external device (Fig 1 and col 5, lines 27-35, 44-45).
2. Providing a second bidirectional transmission channel logically separated from the first bidirectional transmission channel, the separation of the first and second bidirectional transmission channels being so designed that data transmission via one bidirectional transmission channel does not interfere with data transmission via the other bidirectional transmission channel and the second bidirectional transmission channel is activable during the total time period between activation and deactivation of the data carrier (Fig 1 and col 5, lines 27-35, 44-45).
3. Having the data carrier generate a signal required for authenticity testing (col 6, lines 17-64).
4. Transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating the signal for authenticity testing from

the external device to the data carrier at least partly via the second bidirectional transmission channel (col 6, lines 17-64).

5. Having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic (col 6, lines 17-64).

The examiner is applying two interpretations to what it means for a channel to be logically separated. The examiner note that logical separation of a channel as applicant's specification discloses is achieved via modulation of one physical channel. However, one skilled should appreciate that if there were two separate physical channels then the logic utilized to control data transmission in one channel is different and separate from the logic used to control data transmission in the other channel. Since applicant does not recite in claim 1 how logical separation of the channels is achieved, more than one interpretation of logical separation applies to claim 1.

In Saliba's invention, Fig 1 shows the PDA 50 having at least two separate transmission channels. One of the channels is a radio/cellular communication channel and two are IR channels. One skilled should appreciate that the logic used to control IR transmissions is different than the logic used to control radio/cellular transmissions, thus the two channels utilized by PDA 50 disclosed by Saliba are both physically and logically separated from each other. Further, the PDA is shown having a built in IR device and IR provided via an external card 53. One skilled should appreciate that the

logic which controls the IR transmission of the external device is different than that logic which controls the built-in IR device of the PDA.

The examiner has also included a rejection of claim 1 below wherein the examiner interprets logical separation as achieved by modulating one physical channel so that it can function as two channels.

**Claim 8:**

Saliba discloses:

1. Providing a first bidirectional transmission channel for transmitting signals between the data carrier and the external device (Fig 1 and col 5, lines 27-35, 44-45).
2. Providing a second bidirectional transmission channel physically separated from the first bidirectional transmission channel and comprising at least one line or contactless transmission path not provided according to the ISO standard, the second bidirectional channel being activable during the total time period between activation and deactivation of the data carrier (Fig 1 and col 5, lines 27-35, 44-45).
3. Having the data carrier generate a signal required for authenticity testing (col 6, lines 17-64).
4. Transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating said signal for authenticity testing from the external device to the data carrier at least partly via the second bidirectional transmission channel (col 6, lines 17-64).

5. Having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic (col 6, lines 17-64).

**Claim 9:**

Saliba further discloses the contactless transmission path is realized by transmitting the data as electromagnetic, electrostatic, magnetic, acoustic or optical signals (Fig 1 and col 5, lines 27-35, 44-45).

**Claim 10:**

Saliba further discloses that a mixture of wavelengths is used for transmission via the contactless transmission path (col 6, lines 20-21). Use of synch patterns implies a mixture of wavelength used in transmission.

**Claim 12:**

Saliba discloses:

1. The data carrier has a first device for generating signals for data exchange between the data carrier and the external device, and the first device is adapted to be coupled to a first bidirectional channel (Fig 1, item 54).
2. The data carrier has a second device for generating signals required for authenticity testing of the data carrier, and the second devices is adapted to be coupled to a second bidirectional transmission channel and connected with the first device (Fig 2, item 52).
3. The first and second bidirectional transmission channels are separated logically or physically (Fig 1, items 54 and 52).

4. Data exchanged with the second device does not interfere with data exchanged with the first device, and the second device is ready for generating signals for authenticity testing of the data carrier during the total time period between activation and deactivation of the data carrier (col 5, lines 27-35, 44-45).

The first device exchanges data via radio/cellular waves while the second exchanges data via IR. One skilled should appreciate that IR does not interfere with radio/cellular waves.

**Claim 14:**

Saliba discloses:

1. A data carrier with a first device for generating signals for data exchange with the external device and a second device for generating and/or processing signals for authenticity testing (Fig 1, item 50).
2. An external device with a first device for generating signals for data exchange with the data carrier and a second device for generating and/or processing signals for authenticity testing (col 4, lines 49-56 and col 6, lines 17-64).
3. A first bidirectional transmission channel for transmitting signals between the first device of the data carrier and the first device of the external device (Fig 1, item 54 or item 52).
4. A second bidirectional transmission channel for transmitting signals between the second device of the data carrier and the second device of the external device (Fig 1, item 52, note that there are two separate items 52 in Figure 1), the first

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and second bidirectional transmission channels being separated logically or physically and the separation of the first and second bidirectional transmission channel does not interfere with data transmission via the other bidirectional transmission channel, and the second bidirectional transmission channel being activable during the total time period between activation and deactivation of the data carrier (col 5, lines 27-35, 44-45).

Note that there is another bidirectional transmission channel that uses radio/cellular waves. One skilled should appreciate that IR does not interfere with radio/cellular waves.

Claims 1-4, 6-7, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saliba (US 5,894,425) in view of Ehrat (US 3,806,874).

**Claim 1:**

Saliba discloses:

1. Providing a first bidirectional channel for transmitting signals having signal patterns between the data carrier and the external device (Fig 1 and col 5, lines 27-35, 44-45).
2. Providing a second bidirectional transmission channel separated from the first bidirectional transmission channel, the separation of the first and second bidirectional transmission channels being so designed that data transmission via one bidirectional transmission channel does not interfere with data transmission

via the other bidirectional transmission channel and the second bidirectional transmission channel is activable during the total time period between activation and deactivation of the data carrier (Fig 1 and col 5, lines 27-35, 44-45).

3. Having the data carrier generate a signal required for authenticity testing (col 6, lines 17-64).
4. Transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating the signal for authenticity testing from the external device to the data carrier at least partly via the second bidirectional transmission channel (col 6, lines 17-64).
5. Having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic (col 6, lines 17-64).

As noted above, the examiner is applying two interpretations to the what it means for two channels to be logically separated. Saliba does not disclose the second bidirectional transmission channel is logically separated from the first bidirectional transmission channel (in the sense that separation is achieved via modulation of a single transmission channel). However, Ehrat discloses one physical channel being modulated so that two separate bidirectional logical radio channels are achieved (col 4, lines 51-56 and col 6, lines 13-36). Note that in the cited passages, Ehrat discloses that transmission can occur simultaneously in both directions, thus transmission on one logical channel does not interfere with transmission on the other logical channel.

At the time applicant's invention was made, it would have been obvious to one skilled in the art in light of Ehrat's teachings to modify Saliba's invention according to the limitations recited in claim 1 by modulating either the radio/cellular channel or the IR channel into two logically separate bidirectional channels. One skilled would have been motivated to modulate the IR channel to achieve two logically separated bidirectional channels because it would allow the PDA to communicate with more than one storage devices located in computer 12 at the same time, thus information could be gathered more quickly from the storage devices and updates could be uploaded to the storage devices more quickly. Likewise, one skilled would have been motivated to modulate the radio/cellular channel into two logically separate bidirectional channels at the same time because then the PDA would be able to communicate with two separate host devices at the same time. This allows the PDA to obtain further information from host devices more quickly and relay information from the storage device for further analysis more quickly.

Note that from Ehrat's teachings one could further modify Saliba's invention such that instead of using an IR channel to communicate with the storage devices in computer 12, one could modify the drives such that they communicated with the PDA via a radio/cellular channels instead. One radio/cellular channel would still be used to communicate with a host computer while other radio/cellular channels could be used to communicate with the storage devices. One skilled would have been motivated to do so because using a radio/cellular channel would increase the range that the PDA can

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communicate with the drives since radio/cellular signals travel further distances than IR signals without being corrupted and aren't as easily blocked.

**Claim 2:**

Ehrat further discloses the second bidirectional transmission channel is provided by modulating the signal of the first bidirectional transmission channel (co 6, lines 13-36).

**Claim 3:**

Ehrat implicitly discloses the modulation does not impair an ISO compatibility of data exchange between the data carrier and the external device existing for the first bidirectional transmission channel (col 6, lines 33-35). Ehrat discloses that duplex transmission operates with two different transmission frequencies so that transmissions occur simultaneously in both directions. Thus, any ISO compatibility that may exist for the first bidirectional transmission channel would not be affected by the modulation to achieve the second channel.

**Claim 4:**

Saliba and Ehrat implicitly disclose modulation is performed in areas of the signal pattern which are not evaluated according to ISO 7816 (Saliba: col 6, lines 47-64). Note that ISO 7816 is an international standard related to electronic identification cards, especially smart cards. Since Saliba's invention does not use electronic identification cards, the modulation done in Saliba and Ehrat's combination invention is performed in areas not evaluated according to ISO 7816.

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**Claim 6:**

Ehrat further discloses that modulation and demodulation of the signal are performed in the data carrier and in the external device with the aid of a mixing/demixing device in each case (col 6, lines 25-32). Modulators and demodulators are mixing and demixing devices.

**Claim 7:**

Saliba further discloses the first bidirectional transmission channel is a line for transmitting standard data or a line for transmitting a clock signal or a line for supply voltage (col 5, line 65-col 6, line 1).

**Claim 11:**

As per claim 11, the limitation recited is obvious to the combination invention of Saliba and Ehrat. One skilled should appreciate that if the data carrier and the external device cannot exchange data, then the external device cannot receive the authentication data to verify the data carrier is authentic, thus the decision on authenticity of the data carrier is contingent on whether data exchange is possible between the devices to which the first and second transmission channels are coupled to the data carrier.

**Claim 13:**

Saliba does not explicitly disclose the first device and the second device are each coupled to the bidirectional transmission channels via a mixing/demixing module. However, Ehrat discloses a transmission devices coupled to bidirectional transmission

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channels via a mixing/demixing module, i.e. multiplexer/demultiplexer (col 6, lines 13-32).

At the time applicant's invention was made, it would have been obvious to one skilled in the art to modify Saliba's invention according to the limitations recited in claim 13. One skilled would have been motivated to do so because data transmitted are usually multiplexed before transmission and demultiplexed upon receipt.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saliba (US 5,894,425) in view of Ehrat (US 3,806,874) in further view of official notice by the examiner.

**Claim 5:**

Saliba does not explicitly disclose the changes caused by modulation in the signal of the first bidirectional transmission channel are within range of variation of the signal level permitted by ISO 7816. However, official notice is taken that the ISO 7816 standard as well as smart cards used as id cards were well known in the art at the time applicant's invention was made. ISO 7816 is a standard related to electronic id cards, especially smart cards. Note that Ehrat's identification unit is adapted to be carried by authorized personnel (abstract, lines 1-4).

At the time applicant's invention was made, it would have been obvious to one skilled in the art in light of the ISO 7816 standard being well known to modify Saliba and Ehrat's combination invention such that the changes caused by modulation in the signal

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of the first bidirectional transmission channel are within range of variation of the signal level permitted by ISO 7816. One of ordinary skill would have been motivated to do so because it would allow use of smart card technology as the identification unit disclosed by Ehrat.

#### **(10) Response to Argument**

The examiner notes that appellant only presented arguments for independent claims 1, 8, 12, and 14. These claims were rejected under both 35 USC 102(e) and 35 USC 103(a).

Appellant's first argument towards the rejection of claims 1, 8, 12, and 14 is found on page 14 of the appeal brief filed. Appellant's argument is directed towards the 102(e) rejection of the independent claims. Appellant argues that Saliba does not anticipate the subject matter in the recited claims because according to the language of these independent claims, the first and second bidirectional channels each communicate with the same external device. Appellant argues that Saliba does not teach first and second communication channels for transmitting signals between a data carrier and an external device. The examiner respectfully disagrees.

Appellant admits that Saliba teaches at least two separate communication channels (i.e. channel 54 and channel 52, see pages 14-15 of filed appeal brief). However, appellant argues that these channels belonging to device 50 of Saliba do not each communicate with the same external device since channel 54 communicates with remote host computer 60 while channel 52 communicates only with computer 10's

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mass storage drives (see Figure 1). This argument was raised before the examiner previously also and the examiner respectfully maintains his position as set forth in the first paragraph on page 3 of the Final Office action mailed on 11/17/03. As explained in that Office Action, the language of the claims do not require the data carrier to be in communication with a single unit external device. As noted by the Board of Patent Appeals and Interferences in *Ex parte Catan*, which was decided on July 3, 2007, "...[a]lthough a consumer electronics device may be a single unitary object housing all the functions needed to operate the device, this is not always the case...." In other words, one may view the combination of computer 12 and host 60 as being the external device with which data carrier 50 is in communication.

Further, with respect to claim 1, the examiner respectfully points out that the claim states that a first transmission channel is provided for transmitting signals... between the data carrier and the external device. This claimed language seems to indicate that the first channel was provided for a specific intended use, but there is no requirement that the first channel actually be used for that stated purpose. With respect to the second transmission channel, it is noted that according to the fifth clause of claim 1, the signal for authenticity testing or a signal required for generating the signal for authenticity testing is transmitted from the external device to the data carrier at least partly via the second bidirectional transmission channel. From this claimed language, the examiner respectfully submits that the claim only requires that the signal be transmitted at least partly via the second channel. This means that the signal from the external device to the data carrier could have been routed through several other devices

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and several channels, at least one of which is the second bidirectional transmission channel. There is no requirement that direct communication occur between the data carrier and the external device via the second channel. As such, the examiner also respectfully submits that claim 1 does not require the first and second communication channel both be used in communication between the data carrier and the external device, whether or not the external device is a single unitary unit or several units.

Similar arguments also apply with respect to independent claims 8, 12, and 14.

On page 16, appellant states that the preamble of claim 1 describes testing the authenticity of a data carrier by an external device. Appellant states that subsequent references are to the external device, thus the first and second channels are provided between the data carrier and the same external device. This argument is still based upon the assumption that in reciting "an external device", one has to assume that the external device is a unitary device. As explained above, this does not have to be the case since "an external device" may be interpreted as a device composed of more than one unit, i.e. computer 12 and host 60.

The examiner interpreted the teachings of Saliba in more than one manner and also pointed out that Figure 1 of Saliba shows data carrier/PDA 50 having two IR channels provided by unit 52, thus one can also interpret the two IR channels as the first and second channels recited in the claims. On page 16 of the appeal brief filed, appellant argues that Saliba's disclosure does not support this interpretation of two IR channels since subsequent reference to the IR unit 52 in the text refers to IR unit 52 as singular. The examiner respectfully submits that the portion of text cited by appellant

does not necessarily exclude that there are two IR channels for field unit 50 as seen in Figure 1. It could be that the functionality of both IR channels are similar, thus there was only need for the specification to discuss the functionality of one of the IR channels. The IR unit 52 is also not excluded from being viewed as a single unit having two channels. The portion of Saliba cited by appellant in the fourth paragraph of page 16 of the appeal brief filed refers to "an IR send/receive unit 52" and "IR unit 52" without ever describing whether the IR unit 52 is used to produce one or two IR channels. Figure 1 clearly shows the IR transmitter/receiver 52 having two IR ports, one which is built into the PDA device and the second being provided by an external card. Each of these ports are capable of providing a separate IR channel, thus Figure 1 shows PDA 50 as having two IR channels.

Appellant also argues that Saliba does not teach separate logical channels (see page 16 of appeal brief filed). The examiner respectfully disagrees. Note that appellant's specification never explicitly defined what appellant meant by "separate logical channels" and as such, the examiner applied a broader interpretation of the phrase than perhaps appellant intended the phrase to mean. The interpretation used by the examiner, though broad, is reasonable. Appellant's specification gives examples of how separate logical channels "may be achieved". However, explaining how something "may be achieved" and giving examples of what something "may be" in a variant of the invention does not limit or defined what something "is". As explained in the Office Action, in making the rejection of claims 1, 8, 12, and 14 under 35 USC 102(e), the examiner believed that Saliba teaching separate physical channels (i.e. channels

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provided by items 52 and 54 seen in Figure 1) meant that Saliba also taught separate logical channels. Logic required to control a radio channel would be different than logic used to control an IR channel, thus the logic to control the radio channel 54 would be separate from the logic 52 if one were to view the first and second channel as a radio channel and an IR channel. If one were to view the two IR channels of data carrier/PDA 50 as being the first and second channels, then the channels are logically separated because one IR channel's logic is built into the PDA while the second is provided by an external card 53. As such, Saliba teaches separate physical channels and separate logical channels.

In rejecting claims 1, 8, 12, and 14 as being anticipated by Saliba, the examiner also stated that instead of viewing PDA 50 as the data carrier, one could also view computer 12 as the data carrier, while PDA 50 would be viewed as the external device. Computer 12 has several IR ports 24 which could provide first and second communication channels. Appellant argues in the paragraph spanning pages 16-17 of the appeal brief filed that if one were to view computer 12 as the data carrier, there is no teaching of separate first and second communication channels required by the claim because PDA 50 possesses only a single IR unit. The examiner respectfully disagrees; as discussed above already, Figure 1 clearly shows PDA 50 as possessing two IR ports 52, one built into the PDA and the other provided on an external card. Further, as discussed above already, the language of the claims do not actually require the data carrier to perform communication using the two channels with the same external device. Using claim 1 as representative claim, the examiner respectfully maintains that with

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respect to the first channel, the claim recites that the first channel is provided for the intended purpose of transmitting signals...between the data carrier and the external device. This is not a requirement that the first channel actually ever be used to transmit any signal. Figure 1 shows at least one IR channel being used to transmit signals between the computer 12 and the data carrier/PDA 50. This channel could be considered the second channel and any of the other IR ports 24 located on computer 12 could be considered a first transmission channel that has been provided according to what is recited in claim 1. As such, if one were to view the computer 12 as the data carrier, Saliba also meet the limitations recited in the claims under contention.

Appellant's arguments with respect to obviousness rejection of the independent claims over Saliba in view of Ehrat were considered. However, whether or not claims 1, 8, 12, and 14 were obvious over Saliba in view of Ehrat is a moot point because as explained above, the claims were anticipated under 35 USC 102(e) by Saliba and thus the claims are not allowable.

**(11) Related Proceeding(s) Appendix**

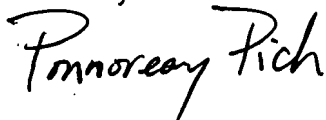
No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

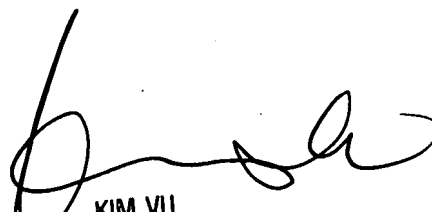
Respectfully submitted,

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